

TOWN OF SALINA  
Refractories Company Town  
Salina  
Westmoreland County  
Pennsylvania

HABS No. PA-5978

HABS  
PA  
65-SAL,  
4-

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

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# HISTORIC AMERICAN BUILDINGS SURVEY

TOWN OF SALINA  
Refractories Company Town

HABS No. PA-5978

Location: Westmoreland County, Pennsylvania

Established: 1876

Brickyard built: 1874, closed 1979

Company  
houses built: 1900-15

Significance: The Salina brickyard was built in 1874 by the Kier family making it one of the oldest refractory brickyards in Pennsylvania. In 1928 the company made improvements to the Salina plant, building two continuous tunnel kilns to replace its periodic beehive kilns. It was the first plant in the refractories industry to use this new technology.

Project  
Information: The results of the study of refractory brickyards and towns was published in 1993: Kim E. Wallace, Brickyard Towns: A History of Refractories Industry Communities in South-Central Pennsylvania (Washington, D.C.: America's Industrial Heritage Project and Historic American Buildings Survey/Historic American Engineering Record, National Park Service).

The contents of this publication were transmitted to the Library of Congress in report form. See additional information on the refractories industry under HABS No. PA-5973, Refractories Company Towns, Mt. Union, Huntingdon County, Pennsylvania. Research notes, field photos and copies of historic photos collected during the project were transmitted to the AIHP Collection, Special Collections, Stapleton Library, Indiana University of Pennsylvania, Indiana, PA 15705.

## Introduction

The Salina brickyard was built in 1874 by the Kier family making it one of the oldest refractory brickyards in Pennsylvania. Although the Kier Fire Brick Company maintained a store in Salina during its early years, it did not build company housing until 1900. Constructed as an improvement to the brickyard operations, the company housing at Salina demonstrates how company housing was viewed as another component of the factory at the turn of the century. In 1928 the company made another improvement to the Salina plant, building two continuous tunnel kilns to replace its periodic beehive kilns. It was the first plant in the refractories industry to use this new technology. The Kier family sold the Salina property to General Refractories in 1930. Although the company store burned in the 1930s, the company hotel, a superintendent's house, and virtually all the company housing remains in Salina. The brick plant is still standing, but most of the brick molds and machinery was removed after the plant was closed in 1979.

## History

Like those at Bolivar and Robinson, the Salina brickworks had its origins in the nineteenth-century investment practices of western Pennsylvania businessmen. Its founder held interests in a number of industrial and manufacturing concerns scattered across the region, but his sons concentrated on the firebrick works and made it into a family business. In the early twentieth century they devoted most of their attention to building the adjacent town, providing residences and services for their employees. They then converted the plant into the most modern twentieth-century refractories facility in the country, selling it to General Refractories, a national company, in 1930.

Samuel M. Kier was a Pittsburgh-based entrepreneur whose business profits were derived largely from investments in Fayette and Westmoreland counties. He was an early investor in one of the Bolivar brickyards, but his name became most closely associated with the town of Salina and its refractory brick works. He inherited his business wherewithal from his father who was a pioneer in drilling salt deposits along the rivers northeast of Pittsburgh near what became the towns of Saltsburg and Salina. Kier began his own career transporting such materials to markets with a controlling partnership in the Merchant's Line of Pennsylvania canal boats. Other Pennsylvania businessmen who were among his partners in this enterprise were Benjamin F. Jones who later founded Jones and Laughlin Steel, in Pittsburgh, and James Buchanan who was elected president in 1856. Just a few

years before the canal boats were made obsolete by the railroad, Kier turned his attention to the properties he inherited along the Allegheny and Kiskiminetas rivers.<sup>1</sup>

About 1845 petroleum began contaminating the area's salt wells, and rather than discard it into the canal as other merchants did, Kier bottled the liquid, outfitted a fleet of medicine show wagons, and began selling it as a miracle cure-all. Although this venture proved successful --"Kier's Rock Oil" was sold into the 1870s and Kier descendants were still receiving requests for it in the 1950s--Kier also pursued other ways to dispose of the oil. He manufactured coal-oil salve and soap, then experimented with distilling processes and refined oil for use in oil lamps. He made other investments in an iron furnace, coal mines, lumbering and pottery making. When he died in 1874 he had just started construction of the firebrick works at Salina and his sons oversaw its completion.<sup>2</sup>

In June 1876 the Saltsburg Press published a description of the new Kier Fire Brick Works and its adjacent town. In the typical fashion of local boosterism, the paper declared that "in point of enterprise, Salina . . . is not excelled by any other place on the line of the West Penn Railroad."<sup>3</sup> A fifty-nine-lot town had been plotted on the hill above the plant. It was described as "beautifully situated on the table land west of the railroad track and presents an inviting appearance to those who desire a healthy and convenient location for a rural home." In February 1876, fifteen to twenty of the lots had been sold "upon some of which improvements have been made." The houses were individually owned, but the Kier company sponsored a general store. The manager of the brickworks, R. A. Paul, also managed the store and kept "a large and varied stock [of] goods, suitable to the wants of the people of Salina and the surrounding county."<sup>4</sup>

The Saltsburg Press pointed out that the railroad was essential to Salina's "enterprise"; the "successful existence of these works may, in a great measure, be attributed to the location and

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<sup>1</sup>Tax assessment records, Fairfield Township, Westmoreland County. Danny Mitchell, "Samuel Martin Kier: Pioneer Industrialist," unpublished term paper, June 9, 1966, 3-5.

<sup>2</sup>Mitchell, 6-15. A number of sources date the Kier brick works at Salina to 1845, but 1875, when tax assessors first recorded the works, seems more likely. Tax assessment records, Bell Township, Westmoreland County.

<sup>3</sup>"Salina Station," Saltsburg Press (June 28, 1876), 3.

<sup>4</sup>Elizabeth J. Kier's Plan of Lots, Salina, Bell Township, Westmoreland County, Penna., "Lots 1 to 58 inclusive are shown in the original plan of Salina recorded Oct. 24, 1876 in Corporation Docket No. 1, page 229." Recorded February 1, 1908, Westmoreland County Courthouse. "Salina Fire-Brick Works," Saltsburg Press (February 23, 1876), 3.

construction of the West Penn Road, which affords a rapid and easy transit to the marts of trade." Although railroad access was a prerequisite for all brickyards and often determined their shape and organization, this was especially so at Salina and would influence not only the plant layout but also its technology. The hillsides rise steeply on both sides of the river, but there was room for the works on a narrow triangle of flat land on a river bend at the entrances to clay and coal mines. The original railroad grade hugged the brow of the hill 420' above the works near the town site and an inclined plane was built to haul bricks up to a track-side storage shed.<sup>5</sup>

In 1876 the Salina firebrick plant was supplied with clay by eight men who mined about twenty-two tons in a nine-hour day. Mules pulled loaded tram-cars from the mine to an open pile where about 1,000 tons of clay were weathered to make it more workable. Molders and repressers turned out bricks onto a hot floor with an 8,000-brick capacity. There was one 16' x 20' kiln and plans for building two more.<sup>6</sup> Hand molders made 450-500 bricks per hour, and with two molders working each day, 8,000-9,000 bricks were readied for the kilns. In 1896 a soft-mud molding machine rated at 12,000 bricks in nine hours was installed. Four years later the phase-out of the hot floor began with the installation of sets of tunnel dryers, and shortly after 1900 a higher speed, 24,000-per-day brick machine went into production.<sup>7</sup>

For its first twenty-four years the Kier Fire Brick Company depended on the available local labor supply, but just after the turn of the century, it began a house building program in a more concerted effort to increase and stabilize its workforce. Between 1900 and 1905 the company built twelve houses. Half were probably one-story buildings located along the river next to the plant. The other six were two-story, four-room, gable-front structures facing Salina's main street, the Perrysville Road.

By 1910, thirty-eight more houses, a hotel, and a town hall had been built on lots set out in the Elizabeth J. Kier plan of Salina, recorded in the Westmoreland County courthouse in February 1908. By 1915 there were five more houses along Porter Street for a total of fifty-five. Twenty of the houses, identical to those along Perrysville Road, were built on Stewart Street. Locally known as "twenty row," they form the residential heart of the community. Six houses of this plan were also built

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<sup>5</sup>"Salina Fire-Brick Works". Saltsburg Press (February 23, 1876), 3.

<sup>6</sup>Ibid.

<sup>7</sup>"Short History of the Use of Machinery in Making Fire Brick at Salina Plant," typescript, no date.

on a bluff overlooking the river. Their geographical isolation meant that their residents were also somewhat socially isolated in a mini-neighborhood called "the Point." These were very basic houses with two rooms on each floor, front porch, back stoop, and partial cellar. The later houses built on Whitesell and Porter streets were larger in plan with five and six rooms.<sup>8</sup>

None of the houses was built with plumbing. There was an outhouse and coal shed in each backyard. Residents carried water from hand pumps located between every two houses.<sup>9</sup> Upkeep and repair of the houses was an assignment of the company's general maintenance crew, indicating that they were viewed as another branch of plant operations. The crew responded to requests to deal with specific problems such as leaky roofs or broken windows and regularly renewed the uniform exterior paint scheme of white with black trim.<sup>10</sup>

There are fairly clear divisions between Salina's private and company-built housing and between the original 1876 plan and the 1908 expansion. A variety of late-nineteenth-century vernacular house forms were built on the original lots along Kier and Elrick streets and the eastern half of Stewart Street roughly parallel to the curving edge of the hill overlooking the Kiskiminetas River. The Perrysville Road, Salina's main street, was developed at the same time the company houses were built. Its private houses and commercial buildings, including the Salina State Bank, date from about 1900 to the 1940s. The company housing, along Railroad, Porter, and Whitesell streets and the northwestern side of Stewart Street, can be identified by its uniformity and lack of ornament. A few more private houses are interspersed on the southeast side of Stewart Street. One of Salina's largest houses, a two-and-a-half-story, colonial revival building, occupies a prime site in the 1876 plan overlooking the plant and the river. It was called "the superintendent's house" not because it was a company house, but because it was built by George Whitesell, a longtime superintendent whose family was involved with the Kiers in company management.<sup>11</sup>

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<sup>8</sup>Tax assessment records, Bell Township, Westmoreland County. Author's interviews with Leonard Stover, June 29, 1991; C. C. Muffley, June 29, 1991; Robert and Lula Ripple, May 16, 1991.

<sup>9</sup>Dr. Cochran, who built a large brick house on the west edge of town (Fig. 3.36), became proprietor of the Salina water company in the 1930s when neighbors asked him to extend pipes from his well. Stover interview.

<sup>10</sup>Stover, Muffley, and Ripple interviews.

<sup>11</sup>Carl C. Muffley, interview by author, Salina, Pa., June 29, 1991.

Three company-owned public buildings were also located directly above the plant. The company store was transferred to private ownership by the early twentieth century and replaced with another building so that current residents have no memory of it. The community building, listed in tax records as the town hall, is remembered as a favorite social center. It had a basketball court, pool tables, and bowling alley, and was often the site of dances. It burned down in the late 1930s. The three-story, mansard-roofed hotel, built to accommodate visiting clients and sometimes to board unmarried employees, is the only one of the three still extant and in use.<sup>12</sup>

The Kier company's residential construction was completed about 1915. In its next modernization effort it returned to the plant proper and planned a full-scale make-over designed, at least theoretically, to reduce the need for labor rather than guarantee it. The reorganization centered around the replacement of the plant's two rows of rectangular, periodic kilns with tunnel kilns. No other refractories plant had tried the tunnel kiln method so this move involved more than the usual risk in experimenting with new machinery. It was further complicated by the fact that the plant site was already crowded and awkward. The railroad track had been moved in the 1880s from the hillside to the edge of the river so it was closer to the plant, but it was still elevated about fifteen feet above the plant floor. The old kilns could not be demolished to make room for tunnels because the company wanted to continue burning brick during the remodeling and wanted a fall-back in case the tunnel kiln failed. As a solution to the lack of space, a second floor was built even with the level of the railroad. An elevator lifted bricks from the tunnel driers up to the new tunnel kiln, and after the firemen successfully mastered the peculiarities of its operation, one row of periodic kilns was demolished. Their tops were knocked in and blast furnace slag provided by the railroad was tamped in and around them until another section of the plant was raised to the new level.

A second tunnel kiln was then built alongside the first, and the remaining periodic kilns were filled in to put all the main plant operations on one level. In the new layout a team of two men stood at each of three presses and set green brick on kiln cars which were then pulled through the drier-kiln cycle. For standard shapes, handling was reduced to a minimum, and with a

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<sup>12</sup>Tax assessment records, Bell Township, Westmoreland County. Robert and Lula Ripple, interview by author, Salina, Pa., May 16, 1991.

railroad siding on each side of the plant, wheeling distances were significantly shortened.<sup>13</sup>

Although plant manager B. E. Whitesell described the remodeling for his peers at a meeting of the American Ceramic Society in 1929, he did not include details on cost and labor savings. Industrial directories show a decline in the labor force at Salina--from 150 in 1919 to 116 in 1925 to 110 in 1931--but this is comparable to figures at other plants that were not so completely mechanized.<sup>14</sup> Whitesell did mention a few improvements for workers that are suggestive of brickyard working conditions. Instead of dumping each hand-molded shape onto the drying floor, he said, workers filled steel pallets on the molding table then set them on the floor. This kept the shapes more stable and uniform and also allowed "the men to work in more comfortable positions" because it reduced the number of times they had to stoop and bend to the floor. A new ventilation system that circulated waste heat from the kilns for use in the driers also brought cool air from the clay mine to relieve the firemen working next to the kilns. A cleanliness and maintenance policy was also introduced. "All departments are cleaned daily, the machines being stopped fifteen minutes before quitting time and cleaned. It has proved well worth the effort, because good labor can and will do still better and will enjoy work more with clean, well-lighted surroundings."<sup>15</sup>

General Refractories bought the Kier Fire Brick Company in 1930, adding the fully modernized plant to its roster. It apparently made little change in plant operations and maintained the local involvement initiated under the Kiers. It continued to oversee the company houses, social hall, and hotel. Salina's company-sponsored baseball team was an important focus and expression of community life through the 1930s and 40s. Good players were sought as employees and given preferential treatment at work so they were in good form for important games.<sup>16</sup>

Before and after the transfer in ownership, company publications praised employees at Salina. One Kier descendant wrote that "the rapport between men and officials was one of admiration and

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<sup>13</sup>B. E. Whitesell, "A Tunnel Kiln Refractories Plant," preprinted for use at annual meeting of the American Ceramic Society, Chicago, Ill., Feb. 1929.

<sup>14</sup>Ibid.

<sup>15</sup>Whitesell, 7, 10-11.

<sup>16</sup>"The General Refractories Company," Grefco Press (September 1946), 2. Robert and Lula Ripple, interview by author, Salina, Pa., May 16, 1991.

friendship." An article in the Grefco Press recounting the plant's history concluded: "one of the things that has always made this plant outstanding and successful is the efficiency of the employees, who are mostly local people interested in the welfare of the community and plant."<sup>17</sup>

Many Salina residents had lived in the immediate area for generations. A few families moved from the brickyards in Bolivar and Robinson to work at Salina. Others became part of the local community about the turn of the century when they immigrated from eastern Europe. One of the shorter rows of company houses was called "Guinea Row" in colloquial reference to its concentration of Ukranian and Polish immigrants. Despite such name calling, the "foreigners" seem to have been accepted into the community. One resident compared Salina to coal towns like nearby Edmon and Tintown because they shared the close, "clannish" feel of a self-contained community where everyone knew everyone else, went to school, to church, gossiped, and worked together.<sup>18</sup>

In the late 1930s when unionization gained some support from the federal government and was made a more immediate issue in the surrounding coal mines, District 50 of the United Mine Workers organized a local at Salina. According to a former president, it did not have much strength in its first years and "was never a radical union." Yet General Refractories was concerned enough about its institution to try to stave it off by giving bonuses to employees just before they were to vote on the union. Although there were a few brief shutdowns and occasions when the company lawyer came from Philadelphia to meet with union representatives, none of the disputes progressed to formal arbitration, and there was never a strike against the plant. Older workers who remembered the union's early days valued it because they could express opinions about day-to-day operations without fear of repercussion, but felt it necessary to emphasize that supporting it did not diminish their pride and willingness to work nor did it mean that the Salina plant was not a good place to work.<sup>19</sup>

Ambivalence about the union as an institution was not simply the expression of people in a conservative time and area, it was a more complicated reaction to the general decline of unionism and to the sense of powerlessness in the face of economic change. The Salina brickyard was closed despite union concessions.

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<sup>17</sup>Mary Wright McKee, "The Kier Fire Brick Company, 1845-1932," leaflet. "History . . . Salina Plant," Grefco Press 1 (July 1947), 1-3.

<sup>18</sup>William Cummingham, Bolivar, to author, April 6, 1992. Ripple interview.

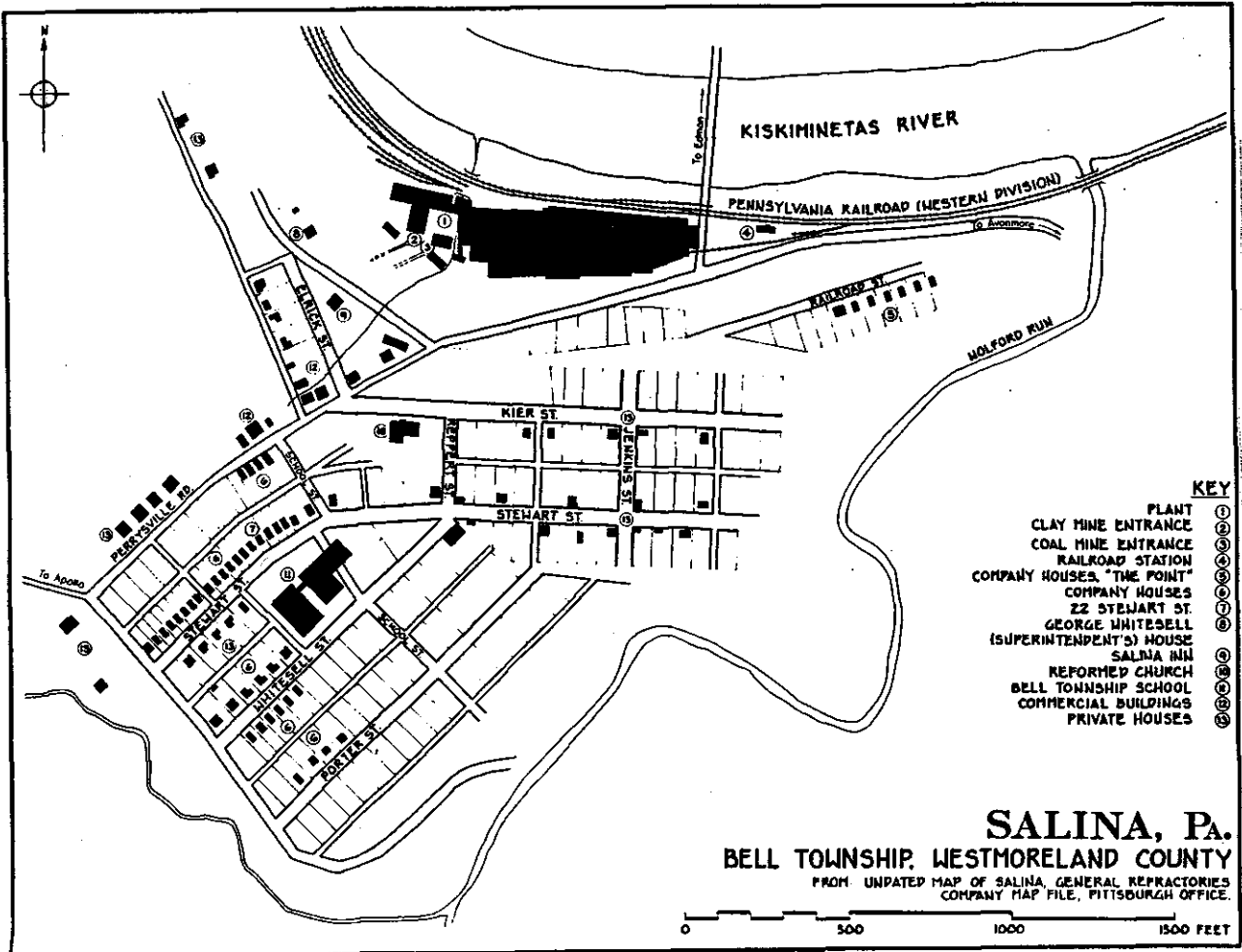
<sup>19</sup>Stover and Ripple interviews. George Sucke, interview by author, Salina, Pa., June 26, 1991.

General Refractories ceased operations there in 1979, citing industry pressures. A few men found work at Sproul and Claysburg, just as some transferred to Salina a few years earlier after plant closings at Orviston and Beech Creek. Remaining raw materials and equipment were sent to the Sproul and Claysburg plants. The buildings at Salina are now used to store brick cars, molds, and machinery salvaged from the Claysburg closing and awaiting shipment to a General Refractories plant still operating in Lehigh, Utah.<sup>20</sup>

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<sup>20</sup>Sucke, Stover, and Ripple interviews.

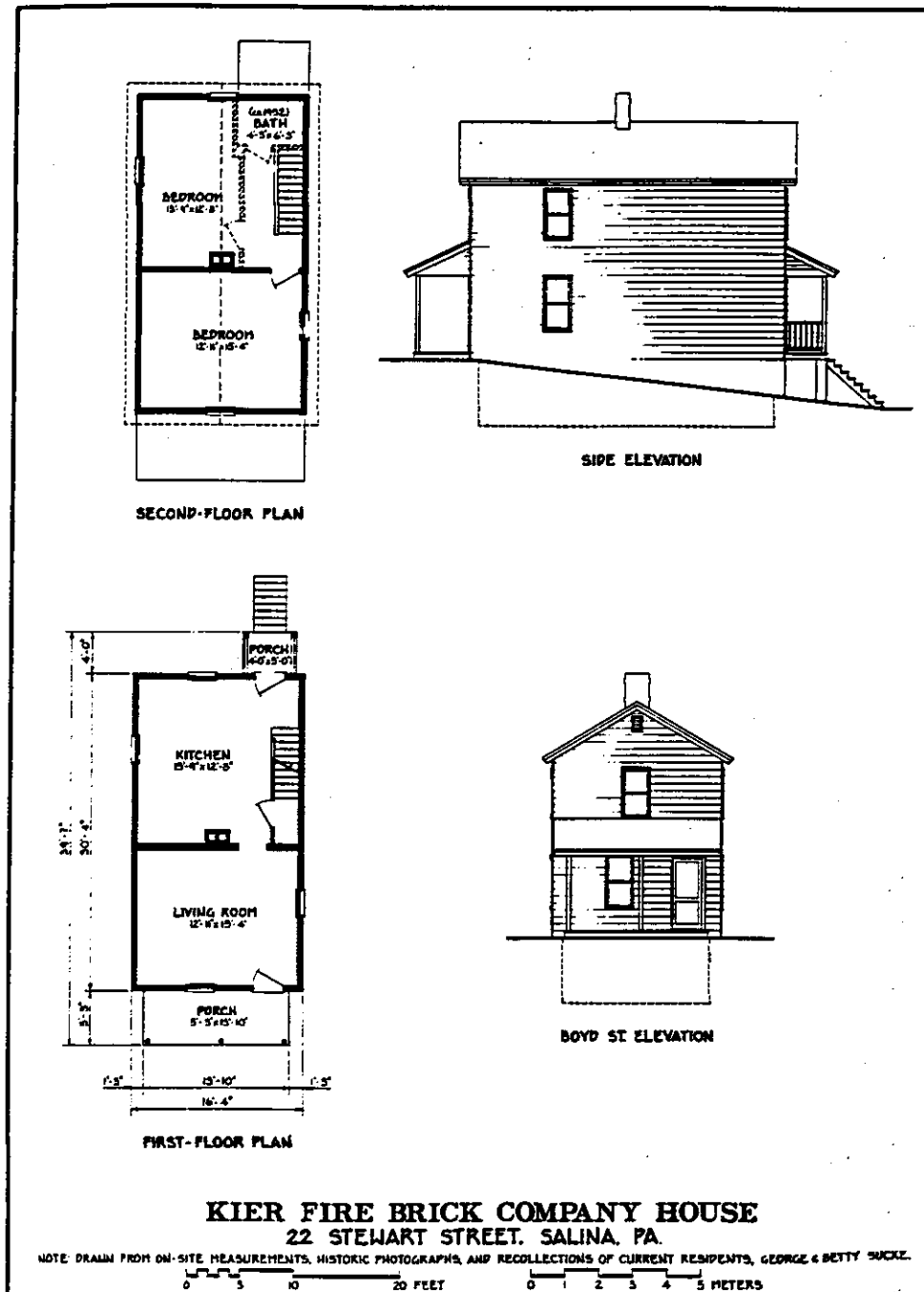
APPENDIX I



Map of Salina showing town and brick plant along Kiski River. Drawn by Isabel Yang.

Reproduced from Wallace, Kim E., Brickyard Towns: A History of Refractories Industry Communities in South-Central Pennsylvania 1993 (Washington, D.C.: America's Industrial Heritage Project and HABS/HAER, National Park Service).

APPENDIX II



Plans and elevations, Kier Fire Brick Company house, 22 Stewart Street, Salina. Drawn by Isabel Yang.

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